AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An exhaust gas purification system ~~of~~for an internal combustion engine, the exhaust gas purification system comprising:

an exhaust gas after-treatment device, which is disposed in an exhaust passage of the engine and supports a catalyst;

temperature sensing means for estimating temperature of the exhaust gas after-treatment device; and

a regeneration system for regenerating the exhaust gas after-treatment device;

wherein the regeneration system comprises:

hydrocarbon supplying means for supplying hydrocarbon to the exhaust gas after-treatment device; and

hydrocarbon supply quantity controlling means for determining an upper limit value of the permissible quantity of the hydrocarbon supplied to the exhaust gas after-treatment device in accordance with the temperature of the exhaust gas after-treatment device estimated by the temperature sensing means, and for controlling the hydrocarbon supplying means so that the quantity of the hydrocarbon supplied to the exhaust gas after-treatment device becomes equal to or less than the upper limit value.

2. (Original) The exhaust gas purification system as in claim 1, wherein

the hydrocarbon supplying means supplies the hydrocarbon to the exhaust gas after-treatment device by performing a post injection of fuel after a main injection of the fuel, by retarding injection timing of the fuel, or by increasing a quantity of the exhaust gas recirculated into intake air.

3. (Currently Amended) The exhaust gas purification system as in claim 1, wherein the regeneration system further ~~comprising~~comprises:

hydrocarbon quantity sensing means for sensing the quantity of the hydrocarbon supplied to the exhaust gas after-treatment device, and

wherein the hydrocarbon supply quantity controlling means controls the hydrocarbon supplying means so that the quantity of the hydrocarbon sensed by the hydrocarbon quantity sensing means becomes equal to or less than the upper limit value.

4. (Original) The exhaust gas purification system as in claim 3, wherein

the hydrocarbon quantity sensing means calculates the quantity of the hydrocarbon supplied to the exhaust gas after-treatment device by adding a quantity of unburned hydrocarbon generated through combustion in the engine to the quantity of the hydrocarbon supplied by the hydrocarbon supplying means.

5. (Original) The exhaust gas purification system as in claim 1, wherein

the temperature sensing means senses temperature of the exhaust gas upstream of the exhaust gas after-treatment device as the temperature of the exhaust gas after-treatment device.

6. (Original) The exhaust gas purification system as in claim 1, wherein

the exhaust gas after-treatment device includes at least one selected from the group of a diesel particulate filter having an oxidation catalyst, a nitrogen oxide removal catalyst, an oxidation catalyst and a three-way catalyst.

7. (New) The exhaust gas purification system as in claim 1, wherein

the regeneration system further comprises means for sensing a particulate matter accumulation quantity, and wherein

the hydrocarbon supply quantity controlling means performs when the particulate matter quantity exceeds a predetermined quantity.

8. (New) A method for regenerating a catalyst in an exhaust gas, after-treatment device while reducing or avoiding hydrocarbon poisoning of the catalyst, said method comprising:

detecting a need for catalyst regeneration and supplying hydrocarbon to the exhaust gas after-treatment device when a need for catalyst regeneration is detected; and

controlling the amount of said supplied hydrocarbon to maintain said amount at or below an upper limit valve that is related to the temperature of the catalyst and that has been determined to thereby reduce or avoid hydrocarbon poisoning of the catalyst.